DOCUMENT RESUME

ED 259 027 TM 850 399

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TITLE "It's Not How Much Brains You've Got, It's How You Use It": A Comparison of Classrooms Expected to Enhance or Undermine Students' Self-Evaluations.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.; National Inst. of Mental Health (DHHS), Bethesda, Md.; Spencer Foundation, Chicago, Ill.
PUB DATE Apr 85
GRANT NIE-G-80-0071; NIMH-1-ROH-MH34379-01
NOTE 24p.; Paper presented at the Annual Meeting of the American Educational Research Association (69th, Chicago, IL, March 31-April 4, 1985).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; *Aptitude Treatment Interaction; Classroom Observation Techniques; Classroom Research; Elementary School Students; Elementary School Teachers; *Expectation; Grade 5; High Achievement; Intermediate Grades; Low Achievement; Models; Motivation Techniques; Self Evaluation (Individuals); Student Evaluation; Student Evaluation of Teacher Performance; Student Responsibility; *Teacher Attitudes; *Teacher Student Relationship; *Teaching Styles
IDENTIFIERS Classroom Dimensions Observation System; *Teacher Expectations; Teacher Treatment Inventory (Weinstein et al)

ABSTRACT

Two fifth grade classrooms representing the extremes of classrooms where students perceived high and low differential teacher treatment were studied to obtain a more in-depth picture of the nature of classrooms that are expected to have contrasting effects on students' expectations and self-evaluations, and to begin to explore a model of classroom factors contributing to the development of students' self-evaluations. In the low compared to the high student-perceived differential treatment classroom, more strategies were used which minimized the opportunity for comparisons between students' ability levels, e.g. divergent tasks, heterogeneous grouping, expressions of respect for individual differences in ease of learning, use of errors for learning rather than for peer comparison. The model--including the influence of other features within the classroom context which may overcome the effect of potentially detrimental factors--generally received support from this analysis. The importance of teachers' beliefs about the nature of ability and teachers' responsibility and effectiveness in implementing strategies for low achievers was also noted. (Author/EDC)

ED259027

"IT'S NOT HOW MUCH BRAINS YOU'VE GOT, IT'S HOW YOU USE IT:" A COMPARISON OF CLASSROOMS EXPECTED TO ENHANCE OR UNDERMINE STUDENTS' SELF-EVALUATIONS

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Abstract

A qualitative analysis of two fifth grade classrooms representing the extremes of classrooms where students perceive high and low differential teacher treatment is presented (a) to obtain a more in-depth picture of the nature of classrooms that are expected to have contrasting effects on students' expectations and self-evaluations and (b) to begin to explore a model of classroom factors that are postulated as contributing to the development of students' self-evaluations. In the low compared to the high student-perceived differential treatment classroom, more strategies were used which minimized the opportunity for comparisons between students' ability levels, e.g. divergent tasks, heterogeneous grouping, expressions of respect for individual differences in ease of learning, use of errors for learning rather than for peer comparison. The model--including the influence of other features within the classroom context which may overcome the effect of potentially detrimental factors--generally received support from this analysis. The importance of teachers' beliefs about the nature of ability and teachers' responsibility and effectiveness in implementing strategies for low achievers was also noted.

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Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, April, 1985.

Work on this paper was supported in part by the National Institute of Education (Grant G-80-0071), by the National Institute of Mental Health (Grant 1-ROH-MH34379-01), and by the Spencer Foundation. The opinions expressed herein do not necessarily reflect the position or policy of the National Insitute of Education, the National Institute of Mental Health, or the Spencer Foundation, and no offical endorsement should be inferred.

In our research on the development of students' achievement expectations, we have been interested in learning more about the nature of the classroom context and teaching strategies that contribute to these self-evaluations. Early investigations of teacher expectancy effects have demonstrated that teachers discriminate in their treatment of high and low achievers on a set of specific teaching behaviors, such as calling on students and criticism for incorrect public responses (Brophy, 1983; Good, 1980). Many of these studies (e.g. Brophy & Good, 1970; 1974) have used quantitative observational measures of discrete teacher behaviors or sequences of teacher-student-teacher behaviors which have overlooked the processes within the student that mediate between differential teacher behavior and student performance. These studies have also neglected the larger context surrounding the specific behaviors with which teachers differentiate in their treatment of high and low achievers. Hence, the focus of our research has been on (a) the student mediational processes involved in teacher expectancy effects and in the development of students' self-evaluations and (b) the classroom context surrounding students' perceptions of differential teacher treatment and the communication of teacher expectations. Our research has utilized qualitative as well as quantitative records of teacher-student interactions in creating a more complete picture of classrooms which are exepcted to have varying effects on students' self-evaluations.

Student Mediation of Teacher Expectancy Effects

Our research is based, in part, on a student mediation model of the processes which intervene between teacher expectations and student achievement (Weinstein, in press). According to this model, patterns of differential teacher treatment are believed to contain cues about expected achievement which students can perceive, interpret, and act on, resulting in different levels of achievement for students about whom teachers hold high and low expectations. A series of studies has documented that (a) students do perceive differential teacher treatment on a set of behaviors derived in part from studies (e.g. Brophy & Good, 1974) of how teacher expectations are expressed in behavior (Weinstein, Marshall, Brattesani, & Middlestadt, 1982), (b) classrooms differ in the extent of differential teacher treatment that students perceive (Weinstein et al. 1982), and (c) teacher expectations are more closely associated with student expectations and with student achievement in classrooms in which students perceive high differential treatment than in classrooms where low differential treatment is perceived (Brattesani, Weinstein, and Marshall, 1984).

Classroom Factors Influencing the Communication of Expectations

In pursuing our research, we have postulated a model of classroom factors that may influence the development of students'

self-evaluations (Marshall & Weinstein, 1984a). Our previous interview studies of students' views of the classroom (Weinstein, 1980) and work on classroom structure and context (Marshall, 1976; Marshall & Green, 1979) have indicated the drawbacks of investigating single variables or groups of variables based on behavioral categories. Due to the importance of the entire classroom context, our model postulates how classroom variables may work together to influence the development of students' self-evaluations and expectations. We have identified structuring and instructional strategies which may have implications for the communication of teacher expectations and the development of self-evaluations. This model recognizes the importance of the context and that particular factors may overcome the potentially detrimental effect of one factor or modify the potentially beneficial effect of other factors within the classroom environment.

According to this model, certain ways of structuring the classroom environment and certain instructional strategies may provide opportunities for students to observe differential teacher treatment reflecting differential expectations and to make comparisons with their peers that affect their own expectations, concepts of ability, and performance. These structuring and instructional strategies include (a) the task structure (e.g. variety of tasks available, divergence of products); (b) grouping practices (e.g. heterogeneous vs. homogeneous ability based, labels); (c) feedback and evaluation procedures and information about ability (e.g. comparativeness, treatment of individual differences, attribution and expectation statements); (d) motivational strategies (e.g. individualistic, cooperative, competitive) (e) locus of responsibility for learning (teacher vs. student), and (f) the quality of teacher-student relationships. (See Marshall & Weinstein, 1984a for an elaboration of the model.)

Two examples will serve to illustrate how the various factors may influence students' ability to observe differences in treatment and make comparative assessments. First, where the classroom is frequently organized for whole class instruction or with stable, homogeneous (ability) groups, comparisons are more easily made than where flexible or heterogeneously composed small groups that are called together for particular short-term purposes are used. A second example demonstrates as well how one teaching strategy (the use of divergent tasks) may compensate for the effect of another strategy (the similarity of assigned tasks) within the larger classroom context: The assignment of the same tasks to all students may increase opportunities for peer comparison. However, even where the assigned tasks are the same, if the tasks require divergent processes or products, students may be less able to compare their work with that of their peers. On the other hand, where tasks are different but from the same series in a sequence, students may be able to compare their own

work with others who are in different places in the assigned series of tasks.

Our specific hypotheses concern both structuring strategies, such as grouping and the nature of the tasks, and interactions between teachers and students. We expected fewer instances of strategies that would allow for peer comparison to be observed in classrooms where students perceived little differential teacher treatment than in classrooms where students perceived much differential teacher treatment. In particular, we hypothesized that in classrooms where students perceive less differential teacher treatment, (a) students are more likely to be given tasks which include divergent products or processes and provided with a greater variety of tasks from which to choose, (b) less time will be spent in whole class structure and more time in mixed structure, (c) groups are more likely to be flexible and heterogeneously composed and given neutral labels rather than labels conveying images of ability levels, (d) student expressiveness would be encouraged, (e) teachers would be less likely to display and compare students' work, especially errors, (f) less competition and ego-involving forms of motivation would be used, (g) students would have greater responsibility for their own learning and evaluation, and (h) more positive evaluation and positive relationships would be observed.

To begin to explore this model of classroom factors which contribute to the development of students' self-evaluations, we collected quantitative and qualitative data in 12 classrooms at three grade levels, selected from the extremes of a larger sample of classrooms where students differed in the extent to which they perceived teachers treating high and low achievers differently. Earlier, we reported on a quantitative analysis of some of these hypotheses (Marshall & Weinstein, 1984b; Weinstein & Mashall, 1984). The hypotheses tested were supported to a greater extent at the fifth grade than at the first and third grades. As predicted, a lower proportion of whole class structure and a greater proportion of mixed structure (where different types of grouping occur simultaneously) was observed in fifth grade student-perceived low than high differential teacher treatment classrooms. At fifth (and first) grade, low differential treatment teachers utilized hetereogeneous grouping more than high differential treatment teachers. In addition, teachers in these fifth grade low differential treatment classrooms showed a greater proportion of positive interactions, including a greater proportion of positive display (to positive plus negative display), positive academic as well as positive behavioral evaluation (to positive plus negative evaluation), buffered criticism (to total criticism), and positive interpersonal relationships (to total interactions) as well as more encouragment of student expressiveness.

As a first step in considering how variables work together within individual classrooms, an informal profile analysis was

also carried out (Marshall & Weinstein, 1984b). In this analysis, the means for each teacher on each of the variables were listed so as to ascertain whether these means for each teacher were consistent with the extent of differential treatment perceived by students for that teacher. The results of this analysis revealed considerable variability in the profiles of teachers who were categorized as high as well as low in the extent of student-perceived differential treatment. That is, within each category (high or low) of differential treatment, the means for each of the variables for each teacher were not completely consistent with the predictions for that category of differential treatment. Qualitative records were utilzed to shed further light on the profile pattern. In some cases, one variable seemed to have compensated for or negated the effect of another variable. (See Marshall & Weinstein, 1984b.)

In this paper, we report on qualitative analyses of data from two fifth grade classrooms selected as representing exemplars from the two poles of classrooms where students differed in the extent of student-perceived differential treatment. Our goals are (a) to obtain a more in-depth picture of the nature of classrooms that are expected to have contrasting effects on students' self-evaluations and (b) to begin to explore the model of classroom factors that contribute to the development of students' self-evaluations. First, we present a summary of themes which emerged from an analysis of the transcripts of the observations in these two classrooms. Evidence of corroboration or disconfirmation of these themes based on teacher interviews and observers' field notes is also described. Second, we examine the relationship between (a) the themes found in these prototypical classrooms and (b) our model of classroom factors postulated as contributing to the development of students' self-evaluations.

Method

Subjects

Of 12 classrooms representing the extremes of student-perceived high and low differential teacher treatment in a larger study (Marshall & Weinstein, 1984b), two fifth grade classrooms were selected on the basis of a quantitative analysis as most closely supporting our hypotheses concerning classroom structuring and interactional strategies contributing to the development of self-evaluations. Classroom I is a perceived high and Classroom K is a perceived low differential teacher treatment classroom.

Initial student perceptions were measured by the Teacher Treatment Inventory (TTI) (Weinstein & Marshall, 1984; Weinstein & Middlestadt, 1979), in which students rate how frequently their teacher works with a hypothetical high and low achieving boy and girl in their own classroom in ways found in earlier research to differentiate between high and low achievers (e.g. "The teacher

calls on him/her to explain things to the class;" "The teacher scolds him/her for not trying.")

Measures

Classroom observation methods. The observers used the Classroom Dimensions Observation System (Marshall & Weinstein, 1982) to make a narrative record of events in the classroom, focusing on those aspects of the classroom and teacher-student interactions which are believed to have implications for the development of achievement expectations: (a) structure of the tasks, subject matter and materials, (b) grouping practices, (c) locus of responsibility in learning, (d) feedback and evaluation, (e) motivation, (f) quality of teacher-student relationship, and (g) expectations. Teacher statements other than subject matter content were recorded as closely to verbatim as possible. Individual students with whom interactions occurred were identified. The observer also made separate notes of impressions and interpretations of events. Field notes were typed immediately according to a format for ease of retrieval of teacher statements.

Observers undertook extensive training over a period of eleven weeks. As a check on inter-observer agreement, the transcripts of the field notes during training were inspected for correspondence of events between observers.

Teacher measures. In the fall and again in the spring, teachers were asked to rank their students on expected year-end achievement in reading, math, and schoolwork in general.

In the spring, teachers were interviewed to clarify the classroom observations. Interview questions focused on (a) grouping practices, (b) uniformity of curriculum sequence, (c) evaluation practices, (d) locus of responsibility (student or teacher), (e) conceptualization of students' abilities, and (f) effective teaching strategies for high and low achievers. Teachers were also asked in an open-ended manner to describe the students whom they had ranked highest and lowest in expectations for year-end reading.

Procedures

Fall. In the fall, student perceptions of differential treatment were measured using the Teacher Treatment Inventory and teachers' expectations for their students in year-end reading, math, and schoolwork achievement were obtained.

Spring. In the spring, trained observers, blind to the actual level of differential treatment perceived by students, observed in one classroom at a time for a period of two to four weeks. Preliminary observations were made to acclimate the observer to the classroom and the students to the observer as

well as to learn the students' names. After these initial observations, an additional 12 hours of observations per classroom or more were made in an attempt to observe three periods during which high and low reading groups received instruction, three math lessons, and some whole class discussion or organizational time. The context of the observations during the remainder of the time varied according to the type of activity common to the particular classroom.

After the observations in each classroom, the observer interviewed the teacher. Interviews were audiotaped and transcribed.

Results

The transcripts of the observations in each of the 12 classrooms in the original study were read and teacher statements reflecting information about management and learning strategies and those conveying messages about ability, expectations, and attributions were recorded (with page and line number). In this initial analysis, no attempt was made to seek direct support for the model of factors expected to influence the development of students' self-evaluations. The statements for each classroom were analyzed for recurrent themes (Spradley, 1980) within classrooms. A summary of themes which occurred in any of the classrooms was then made. The transcripts of each classroom were read a second time in search of (a) evidence of any of the summary themes that had not originally been found in that classroom, (b) disconfirming evidence of any of the themes (Miles & Huberman, 1984) and (c) teacher statements reflecting other factors from the model not represented by the themes. Corroboration by triangulation (Cicourel, et al, 1974) was sought by checking the themes against observer's impressions and teacher interviews.

The themes that emerged from the transcripts and examples from each classroom are displayed in Tables 1 and 2. These themes, together with supporting and qualifying evidence from the teacher interviews and observer impressions, are described below. Following this description, the correspondence between these themes and the model of classroom factors that influence the development of students' self-evaluations is explored.

Themes from Contrasting Classrooms

In Classroom K, the low perceived differential treatment classroom, five major themes are apparent: (a) a learning orientation--that the purpose of the work is to learn, that learning is fun and a challenge, and that thinking is important; (b) the teacher's beliefs in student capability and responsibility for learning; (c) peer helpfulness; (d) respect for individual differences; and (e) a generally positive atmopshere. Competition in learning is against the teacher, e.g.

"I'm gonna catch you. This is tricky." Emphasis is on learning and thinking rather than on just getting work done. Making mistakes is a part of the learning process rather than a sign of low ability. Students are told, "I'm not interested in how many you got wrong; I'm interested in if I can help you." Expectation statements convey the sense that students can do it. Attributions for success or failure are often to external sources, such as the book going too fast, and sometimes to effort, rather than to ability. One discussion centered on different opinions about smartness and that it is not how much brains you have but how you use them. Responsibilities are assigned and students seem to know what to do and when. Teacher K responded to a student request for a Valentine's Day celebration by indicating they could take responsibility for deciding about having "a little something." "You discuss it. It's up to you. You decide." Student responsibility for evaluation is exemplified by a comment to a low achiever about her writing: "I know you have beautiful writing when you want... Let me ask you: Are you proud of it?" Respect for each student and for individual differences can be seen in such statements as, "Finish [what you are saying even though the bell rang] because you're important." "Hands down. Give her a chance [to think]." The theme of peer helpfulness is frequently found in combination with that of respect for individual differences. The students were grouped into academically and socially heterogeneous "families" for seating and study period so that students could help each other. In announcing those who received good scores on spelling, Teacher K said, "For some, spelling is the hardest subject. Your 'families' are going to help you." Peer helpfulness is also illustrated by such comments as "If you think you understand parts of speech, you can help out." The generally positive atmosphere included positive management techniques as well.

In the teacher interview, Teacher K emphasized her belief that many of the low achievers "really have ability and they're just putting a lamp shade over it ... because I know it's there and they'll do it sometimes, but see, not consistent enough that they're finding the joy because they have enough skills." She stated that it is a lack of self-direction that is holding them back. What she hopes to do is "to get them motivated enough that they want to." Teacher K acknowledges the "brightness" of high achievers, but does not necessarily see low achievers as lacking in ability. She also spoke of her attempt to get a mixture of academic and social into "families" so that students "can learn from each other and help each other." In support of the theme of student responsibilty, Teacher K described her use of supplementary materials, such as contracts and kits for those students who are self-directing as well as how she has students participate in evaluating their own work by asking them if they are proud of it or by supplying a cover sheet for students to evaluate their projects.

The observer's impressions supported the themes of student responsibility for learning and evaluation as well as the teacher's expectations that students will learn and get the answer. The observer noted that Teacher K sometimes had students evaluate their behavior and the amount of learning at the end of a period. Expectations for learning were conveyed by the teacher's waiting for a response, probing and "challenging" them to get the answer.

In Classroom I, the low perceived differential treatment classroom, the major themes that emerge from the transcripts are (a) a work orientation, (b) teacher rather than student responsibility for learning and evaluation, and (c) the negative nature of the teacher's expectations and beliefs about their capability, accompanied by public display. Students need to finish their work so they can "go out to recess" or "get out of that book" rather than learn or think. Teacher rather than student responsibility is illustrated by Teacher I's responding for students and cutting off opportunities for them to respond, such as reading their responses for them, completing a problem, drawing a face. Teacher I also refused to allow a Valentine's party, since she had to spend 45 minutes cleaning up from the Christmas party. The theme of the negative nature of the teacher's expectations can be seen in both the display of errors and ability labeling. Teacher I asked how many people made mistakes; when no one responded, she announced, "I've got one here who got the whole row wrong." Seating was arranged according to high or low group (and consequently largely by race in this class). The high group is labeled "top group." Students are threatened about being removed from the "top group" if they do not "stop fussing." High expectations are expressed for high expectation students, e.g. to read "semi-adult books," "I don't expect you people in the top group to get low grades in spelling."--though some reservations were expressed about one student. Positive expectations were also expressed for the middle level students. In contrast, Teacher I commented aloud to the observer, "Now do you see why this is the lowest group?" Attributions were more frequently made to internal sources, e.g. effort, ability, immaturity, than to external sources such as task difficulty.

Teacher I's attitude towards ability was also evident in the interview transcripts. Although she remarked that the information she received about the ability level of her students at the beginning of the year was "in the eye of the beholder," she seems to hold a traditional unidimensional conception of intelligence as a stable, general ability. In referring to a larger spread in test scores when she had used individualized instruction, she stated, "You still had some low children. If the brains aren't there, the brains aren't there." This view of ability as inherent in the student and not really a part of the teacher's responsibility was also apparent in her description of the student for whom she had the lowest expectations. She

recognized that he had "an exceptionally good oral vocabulary" and believed it is "unfortunate" that "he feels very low about himself." Yet, it seemed that she could wait until he got into the adult world and found his "niche:" Then "you will see a difference in him."

In some places, the teacher interview suggests a discrepancy between what was observed concerning comparative evaluations and what Teacher I reported. Teacher I ranked comparison with the rest of the class as her least frequent method of evaluation (compared to comparison to grade level norms or to absolute standards of correctness); yet the transcripts indicate that she makes subtle comparisons to others, particularly in her threats to move students out of a group or exhorting them to do better.

The observer's field notes provide support for the differences in the treatment of high and low achievers in this classroom, but cast it in a slightly different light. The observer stated that the class was structured so that students could assume responsibility, e.g. choice about which task to do when, and that Teacher I made it clear that children (in all groups) have the ability to learn. Her criticisms focused on the application of that ability, regardless of level. In summarizing the observations, the observer noted that in this type of classroom structure--where the teacher helps those individuals who are motivated or assertive enough to seek it and where more instruction and time is devoted to the high groups--opportunities benefit high achievers more than low achievers.

In summary, this theme analysis demonstrates some clear differences between these two classrooms in the orientation towards learning, in responsibilty for learning, and in the teacher's beliefs about students' ability and their expectations for performance. For the most part, the themes were corroborated by the teacher interviews and observer impressions. These differences were also apparent in a comparison between lessons in these two classrooms (Marshall & Weinstein, forthcoming).

Correspondence between Themes and Model

The correspondence between the themes that emerged from this analysis and our model of factors contributing to the development of students' self-evaluations (Marshall & Weinstein, 1984a) is described according to each of the factors.

Task structure. The model of classroom factors influencing the development of students' self-evaluations predicts that students in low compared to high perceived differential treatment classrooms would be more likely to work on a greater variety of tasks simultaneously and on tasks that involve divergent products and processes, since these structuring strategies would be expected to allow for less peer comparison. Similarly, a greater

difference in task sequence and pacing would be anticipated in low than in high differential treatment classrooms.

Strategies related to task structure did not emerge in the theme analysis based on the initial nondirected review of statements from the transcripts. On rereading the transcripts to locate statements that specifically concerned task structure, some variety of tasks was noted in both classrooms--largely due to the activities of students who finished their assigned tasks earlier or later than the others. According to the observer's notes, students in Classroom I have considerable discretion about which of their assigned tasks to do when. However, because all of the tasks were assigned to everyone or everyone within the group, comparison was certainly possible in both classes.

More salient in diminshing the importance of social comparison were a number of strategies used in Classroom K in conjunction with the task structure. Even where the whole class was working on the same convergent task at the same time, Teacher K often asked open-ended questions and accepted more than one response; or where a response was incorrect, she probed until the student arrived at the correct answer--minimizing the perception that some students got the wrong answer. In some math lessons, she had students hold up an answer card so that only she could see who had the correct answer. Furthermore, Teacher K more frequently assigned tasks which required divergent processes or products, such as creative writing, "decision-making lesson", and even math lessons where students could arrive at the correct answer in different ways. In contrast, in Classroom I, even the art lesson (drawing a face) was directed so as to be more convergent than divergent.

Grouping. The model predicts that heterogeneous groups will occur less frequently in high than in low differential treatment classrooms--increasing the salience of different levels of homogeneous ability groups. Labels conveying images of ability would also be more likely to be observed in high differential treatment classrooms, again highlighting the visibility of students' relative ability.

Differences between these classes in the basis for grouping (heterogeneous vs. homogeneous)--at least for some of the groups--and labelling of groups is apparent from the theme analysis. As noted above, heterogeneously grouped families are one vehicle through which the theme of peer helpfulness was implemented in Classroom K. Messages concerning the purpose of these heterogeneous families--to help those in their "family" who are having difficulty--were also used to convey themes of respect for individual differences and that everyone can learn.

In contrast, the label "top group," implying grouping based homogeneously on ability and that those not in the "top group"

may have less ability, was noted as evidence for the theme of Teacher I's negative beliefs and expectations.

Feedback, evaluation, and information about ability. Differences between high and low differential treatment classrooms are predicted in the visibility of evaluation and in the treatment of incorrect answers, as well as in teacher statements of expectations, attributions for success and failure, and concerning the nature of individual differences. In low compared to high differential treatment classrooms, evaluation is expected to be less visible and errors are expected to be used as a basis for learning rather than being pointed out as indicative of ability or performance. Fewer statements that display differences between high and low achievers, fewer attributions to ability and greater acceptance of individual differences are expected in low compared to high differential teacher treatment classrooms.

Anticipated differences between Teacher K and Teacher I in the visibility of evaluation, the treatment of incorrect responses, and statements concerning expectations, attributions and individual differences were noted in the discussion of themes of Teacher K's belief in student capability and responsibility for learning and the negative nature of Teacher I's beliefs about student capability and public display. Contrary to our hypothesis concerning less display of performance, Teacher K was observed to announce the good scores on some tests. However, the potentially negative consequences of this strategy may have been alleviated by other compensating features, such as her attitude and statements of acceptance of individual differences in ease of learning different subject matters--informing the students that some students have more difficulty in spelling or in math and that their "families" would help them. These examples are also illustrative of Teacher K's view of individual differences in various abilities, not found in Classroom I.

Motivational strategies. Our model predicts that more task-involving strategies (Nicholls, in press) as well as more cooperative strategies would be used in low than high differential teacher treatment classrooms, since peer comparison is generally less important in task-involving than ego-involving situations as well as in cooperative groups than in competitive situations (Nicholls, 1980; Pepitone, 1982).

The theme of learning as fun and a challenge supports the task-involvement anticipated in Classroom K and not found in Classroom I. Similarly, cooperative groups, seen as evidence for the theme of peer helpfulness in Classroom K also serve as motivational strategies. Competition was either between heterogeneous groups, against the teacher, or against the prior class record--minimizing the importance of ability differences found in other forms of competition. Neither competition nor cooperation were particular themes in Classroom I. Although the

observer noted that students were free to work together, Teacher I seemed to express some reservations about their ability to be helpful on occasion. Motivation in this classroom was conveyed more through threats and demands.

Locus of responsibility. In low differential treatment classrooms, students are expected to share more of the responsibility for learning and evaluation. Where students are given some responsibility for their own learning and evaluation, greater variations in the products of learning and criteria for evaluation are anticipated, resulting in decreased opportunities for direct comparison between peers.

The clear differences between Teacher K and Teacher I in locus of responsibility was elaborated in the discussion of the themes (above). Examples of Teacher K's encouraging student responsibility for learning and evaluation and of Teacher I's assuming responsibility were given.

Quality of relationships. More positive relationships were predicted in low than high differential treatment classrooms. As noted above, the generally positive atmosphere and management techniques, which include supportiveness and interest in students was a theme found in Classroom K. In contrast, the relationships in Classroom I seemed to be colored by the negative nature of the teacher's expectations as well as her management techniques which included threats and demands.

Other. The differences between these two classrooms in orientation towards learning or work was unanticipated by the model.

Discussion and Conclusions

The qualitative analyses of the observations and teacher interviews in two classrooms where students differ in the extent to which differences in the treatment of high and low achievers are perceived enlighten our understanding of classroom differences postulated as influencing the development of students' self-evaluations. In the low compared to the high student-perceived differential treatment classroom, more strategies were used which minimized the opportunity for or the importance of comparison between students' ability levels. In the low differential treatment classroom, divergent tasks and heterogeneous grouping occurred more frequently. In contrast, labelling by ability group was observed in the high differential treatment classroom. The low compared to the high differential treatment teacher more frequently expresssed positive expectations, made attributions to external sources, and conveyed respect for individual differences in the ease of learning. Errors were seen as a part of the learning process rather than a as source of comparison. Learning was motivated by challenge, by helpfulness among peers, and by competition against the teacher

rather than by demand or threat. Students were encouraged to take responsibility for their own learning and evaluation. In addition, the atmopshere and the quality of teacher-student relationships were more positive in the low than in the high differential treatment classroom.

In general, these differences support the model of classroom factors which enhance or undermine the development of students' self-evaluations. In some instances, such as in the variety of tasks, no differences between classrooms were found. Certain features, such task variety or the display of good work, may not be as critical as anticipated by the model. Yet, compensating features within the larger context--as expected from the model--such as the teacher's attitude towards errors and respect for individual differences, may override potentially detrimental effects of these features.

The qualitative analyses reported here highlight the importance of qualitative data in demonstrating the operation of classroom factors which may compensate for or negate potentially positive or negative effects of other factors. These qualitative analyses also help to flesh out what now appear to be the somewhat skeletal findings from the quantitative analyses.

Although not stated in our model, differences between these two types of classrooms in attributions to effort compared to ability might be anticipated. We noted that Teacher K gave a greater proportion of attributions for lack of success to external sources, whereas Teacher I made relatvely more attributions to internal sources. Within the internal dimension, Teacher K never made attributions for success or failure to ability and only occasionally referred to effort. In contrast, Teacher I more frequently attributed to ability and immaturity and occasionally to effort. Attribution to effort has sometimes been advocated as a strategy to avoid or overcome "learned helplessness" (e.g. Diener & Dweck, 1978; 1980). However, since references to effort needed may begin to imply lack of ability to some students at this age (Nicholls, 1978), attributing success or failure to external sources--or to problem-solving strategies (Clifford, 1984)--may be more productive.

The observed differences in strategies noted above may contribute to students' perceptions of differential treatment and to the development of their expectations and self-conceptions. Nevertheless, two more basic variables may undergird these differences between the classrooms. These basic variables became apparent in inspecting the teacher interviews. The first of these essential variables includes differences in the teachers' beliefs about their responsibility for and effectiveness in helping low achievers. Teacher K, for example, described her attemtps to motivate those who are not working to the best of their ability. In contrast, Teacher I appears content with sending the lowest achiever to the special education class, assuming that some day

he would find his niche. The importance of a teacher's personal sense of teaching efficacy, of having the skills and abilities to bring about student learning, has increasingly been recognized (e.g. Gibson & Dembo, 1984). Teachers' beliefs in their ability to find and utilize effective teaching methods also seems to be an important variable in the research on teacher effectiveness (Brookover, et al., 1978; Brophy & Evertson, 1977).

The second underlying difference between these two teachers concerns their beliefs and attitudes about ability. (Cf. Dweck & Elliott, 1983; Rosenholtz & Cohen, 1983; Rosenholtz & Simpson, 1984; Simpson, 1981.) Teacher K's beliefs about ability seem to incorporate the conception that ability is multidimensional (that different individuals are good at different things) and incremental (that low achievers have the ability to improve). She implements this belief by pointing out individual differences in skill areas, by her motivational strategies, and by expecting students to arrive at the correct answer, as well as in the discussion about the importance of how you use your "brains." In contrast, Teacher I appears to hold a more unidimensional and static view of ability. Although she tells students that they have the brains to be in the "top group," her statement in the interview that "if the brains aren't there, the brains aren't there" and her lack of perceived responsibility for helping low achievers to improve seems to reflect a unidimensional and stable view of ability.

In summary, we speculate that two underlying factors are critical for the enhancement of students' self-evaluations: (a) the teacher's belief that ability is multidimensional and incremental and (b) the ability to implement structuring and instructional strategies that support these views. (See Marshall & Weinstein, 1984a.) Both of these may enter into the teacher's sense of teaching efficacy.

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Table 1

Teacher K Themes

THEMES	EXAMPLES
LEARNING ORIENTATION	
Purpose is learning	"If you're not here to learn, go next door."
Learning is a challenge, fun	Puts problem on board: "I challenge you." "This is tricky. Give me a statement of fact that is not true." "Let's review place value. See if I can throw you off."
Learning requires thinking	"Think it through." T does math game problem along with students."I'm doing heavy thinking." "DY, I'm proud of you. You heard moans and went on and did your own thinking. I thought I was going to get you."
BELIEF IN STUDENT CAPABILITY AND RESPONSIBILITY	
Errors are a source of learning	"If you make a mistake, it's ok. Don't change it. Cause we can figure out what went wrong." "If you made a mistake, write it correctly so you know which ones to study."
Self-evaluation	After probing JH, "Does it make sense?" "I know you have beautiful writing when you want." DE asks about doing it over. "Let me ask you: Are you proud of it?"

Table 1 (cont.)

Expectations	"If you think about it, you can do it. Problem is if you don't think. See if you can get 100%. I think you can." To student who says he doesn't know if the answer is right. "All right. Give it a try." To incomplete response: "That's all? (Waits) Try to figure out where to put (the apostrophe)."
Attributions to external sources	"Maybe the book is wrong." "If you make a mistake, don't worry. This is the first day. The book goes fast--faster than the book before."
PEER HELPFULNESS	"If you think it's right, but you're not sure, put a '?' Get someone in your family to go over it with you." "Some in each family passed all four (math skills tests). So your family has someone to be a teacher and a helper."
RESPECT FOR INDIVIDUALS	"Don't worry about spelling. You'll be graded for ideas. I'm interested in what you say." "JH has a very good brain that he wants to use" (to DE who is bothering JH).
MANAGEMENT	
Proactive	T stands in doorway after recess. Says to each student: "If you walk through, it means you're quiet and ready to work." "Are you with me? DE. It's really important cause you're with (Student Teacher). We're reviewing just for you."

Table 2

Teacher I Themes

THEMES	EXAMPLES
WORK ORIENTATION	"He's trying to finish so he can go out to recess." "RA, work faster so you can get out of that book. You are in it because you have good work habits. ... You have to work." To student who refuses to do his work: "Yes you are. It's not a question of not doing it."
TEACHER RESPONSIBILTY	"Lumbered means what? (Without pausing) It's a way of walking." (To MIE) "Do an oval." (Takes pencil and draws for her.) MS is reading aloud in group. Teacher interrupts and reads sentence for her.
NEGATIVE EXPECTATIONS, BELIEFS	
Display of errors	"GE, you did better, but you made some mistakes." "How many people made mistakes? Be honest with yourself and me. (Children do not raise hands.) I've got one here who got the whole row wrong."
Labelling	"LA, you are either in or out of the top group. You can spend a lot of time drawing pictures." "Come on, lazy (AL), (read some more."

Table 2 (cont.)

Expectations	To RA who says he understands problem Teacher has just explained to him: "No, you don't. You will come to me in a minute and ask for help again. Come here to the board." To FR who indicates interest in the Science Fair: "FR, got something ready? I'm not going to discourage you, but I want to give you the time schedule." "Do you realize how immature you are acting now? You people (middle group) are hard to work with because you get babyish. You have been in fifth grade past 6 months now. Not one of you sitting here who doesn't have the brain power to be in the other (top) group."
Attributions	"Some people have the brains to do it without being told. I don't think you are without brain power." "You know why you aren't getting these numbers! You are acting like babies--you don't pay attention unless I am talking to you (top math group)." "Now that is not the whole answer. Come on, lazy!"
MANAGEMENT	
Negative quality	"KI, if I see you doing anything else but math, I will call your mother at 10:00 and she can come get you." "I said, clear desks now or we will stay in 5 minutes after the recess bell." "I guess the only thing I can do is write your name down if you're not working. You think that when I'm not paying attention to you, you can play. Bench time at lunch with an assignment if your name is written down."